

Research Training Group 1976: „Functional diversity of cofactors in enzymes“

The University of Freiburg (Albert-Ludwigs-Universität) welcomes applications for **PhD positions** for a three-year structured program in the varied fields of the Research Training Group „Functional diversity of cofactors in enzymes“ (RTG 1976, www.cofactor-diversity.uni-freiburg.de/RTG).

The Research Training Group focuses on the diversity of cofactors in enzymes with different projects reaching from enzymology and mechanism of cofactors and enzymes to their application in medicine and biotechnology.

Currently the following projects have open positions for PhD students:

- **P3:** Studies on F420-dependent oxygenases involved in the biosynthesis of polyketides, **Prof. Dr. Andreas Bechthold**; Starting date: **November 1st, 2017**

The Bechthold group executes experiments on biosynthesis of natural products, which are produced by microorganisms. The planned project focuses on biosynthesis enzymes. Their function and cofactor dependency is still unknown.

- **P13:** Characterization of light-active multi-cofactor proteins with photoreceptor ability or photorepair activity; **Prof. Dr. Stefan Weber/PD Dr. Erik Schleicher**; Starting date: **November 1st, 2017**

The scientific goal of this project is to unravel light-induced intermediates in flavin-dependent blue-light photoreceptors, in particular by using time-resolved molecular spectroscopy. More specifically, unraveling the interplay between organic and transition metal cofactors at various time scales and their influence on protein functioning will be the focus of the PhD project. Despite an interest in molecular spectroscopy, a background in protein production and molecular biology is beneficial as protein samples and cofactors will be produced in our laboratory.

We are seeking PhD applicants with an excellent master's degree (or equivalent) in chemistry, biology or physics. Applicants should show a high engagement and have a strong interest in the interdisciplinary focus of the group.

- **P9:** Cofactor-mediated electron transfer in cellular respiration; **Prof. Dr. Carola Hunte**, Starting date: **December 1st, 2017**

One PhD position is open in the Hunte lab to study fundamental processes of biological energy conversion and their implications in health and disease. Focus will be on cofactor-mediated electron transfer in cellular respiration. Membrane protein complexes will be studied with an integrated structural biology approach (X-ray, NMR, EM) that combines molecular biological, biochemical and biophysical methods.

The Hunte research group is based at the Institute for Biochemistry and Molecular Biology (<http://www.biochemie.uni-freiburg.de/ag/hunte/>) and is member of the BIOS Centre for Biological Signaling Studies (Cluster of Excellence, <http://www.bioss.uni-freiburg.de>). We are offering a dedicated research environment with state-of-the art facilities for membrane protein research at the molecular level. We are seeking highly motivated and qualified individuals with a keen interest in molecular biomedical research. For further information, please contact Carola Hunte (Email: carola.hunte@biochemie.uni-freiburg.de).

The three-year structured program consists of lecture series, PhD seminars, workshops, symposia and retreats. In addition, participants will have the possibility to attend courses for individual need. Successful candidates will be awarded the PhD degree (Dr. rer. nat.). The program is taught in English.

Requirements:

- excellent graduates in the fields of pharmacy, chemistry, biology, biochemistry, biotechnology (Master or equivalent)
- proven interest in one or more of the above indicated research fields
- highly motivated and committed
- interested in participating actively in the program of the RTG
- very good written and spoken English skills

The duration of the PhD position is limited to three years. The salary is in accordance with the German public service salary scale (TV-L E13, 65%).

The following documents are required for your application as PhD student:

- a cover letter stating your interests and why you want to become part of the RTG, preference for one project and why you think you would fit into this project
- your curriculum vitae
- your degree certificates and study transcripts with a description of the grading scheme
- an abstract (maximum 1 page) of your diploma or master thesis
- a list of your publications, if available
- addresses of two potential references and, if available, letters of recommendation
- a tangible proof of your fluency in English, i.e. certificate (TOEFL, Cambridge certificate, IELTS); German "Abitur" is eligible as proof of fluency in English

All documents should be provided in English.

Please submit the above-mentioned documents as **one** PDF file.

Interested candidates should send their application containing the required documents as **one** pdf file only to susanne.elfert@pharmazie.uni-freiburg.de. Deadline for **P3** and **P13** is **September 10th 2017**, for **P9** **October 10th 2017**.

Please refer to "Application RTG 1976" in the subject line.